In the claims:

1. (Original) A composition having an acidic pH, the composition being prepared by mixing ingredients comprising:

a salt of phosphoric acid; and

a preformed, or in-situ generated, solution or suspension of an acidic sparingly-soluble Group IIA complex ("AGIIS"), wherein the solution or suspension of AGIIS is in an amount sufficient to render the acidic pH of the composition to be less than about 2.

2. (Original) The composition of claim 1, wherein the solution or suspension of the AGIIS is isolated from a mixture comprising a mineral acid and a Group IIA hydroxide, or a Group IIA salt of a dibasic acid, or a mixture of the two.

3. (Original) The composition of claim 2, wherein the Group IIA hydroxide comprises calcium hydroxide, the mineral acid comprises sulfuric acid and the Group IIA salt of a dibasic acid comprises calcium sulfate.

4. (Original) The composition of claim 1, wherein the solution or suspension of AGIIS having a certain acid normality is less effective in charring sucrose and less corrosive to an animal skin than a saturated solution of calcium sulfate in sulfuric acid having the same acid normality, and wherein the solution or suspension of an AGIIS is of low volatility at room temperature and pressure.

5. (Original) The composition of claim 1, wherein the salt of phosphoric acid comprises a divalent metal salt of phosphoric acid.

6. (Original) The composition of claim 5, wherein the divalent metal comprises an alkali earth metal or a metal of first transition series.

7. (Original) The composition of claim 1, wherein the salt of phosphoric acid comprises a mono-valent metal salt of phosphoric acid.

8. (Original) The composition of claim 7, wherein the mono-valent metal comprises an alkali metal.

9. (Original) The composition of claim 1, further comprising an additive.

10. (Original) The composition of claim 9, wherein the additive comprises an alcohol.

11. (Original) The composition of claim 10, wherein the alcohol comprises a lower aliphatic alcohol having six or less carbon atoms.

12. (Original) The composition of claim 9, wherein the additive comprises an organic acid.

13. (Original) The composition of claim 12, wherein the organic acid comprises lactic acid, acetic acid, propionic acid, oxalic acid, peracetic acid, sorbic acid, benzoic acid, butyric acid, glycolic acid, formic acid, monoperphthalic acid, or a mixture thereof.

14. (Original) The composition of claim 9, wherein the additive comprises a surface active agent.

15. (Original) The composition of claim 14, wherein the surface active agent comprises a cationic surface active agent, an anionic surface agent, a non-ionic surface active agent, or a mixture thereof.

16. (Original) The composition of claim 9, wherein the additive comprises a periodic acid.

17. (Original) The composition of claim 9, wherein, based on the final weight of the composition, the amount of the additive ranges from about 0.01% to about 99%.

18. (Original) The composition of claim 1, wherein the solution or suspension of AGIIS is present in an amount in excess of the amount required to completely convert the salt of phosphoric acid to phosphoric acid.

19. (Original) A composition having an acidic pH, the composition being prepared by mixing ingredients comprising:

a salt of phosphoric acid; and

a preformed, or in-situ generated, solution or suspension of an acidic sparingly-soluble Group IIA complex ("AGIIS"), wherein the solution or suspension of AGIIS is in an amount sufficient to render the acidic pH of the composition to be less than about 2;

wherein the solution or suspension of the AGIIS is isolated from a mixture formed by mixing ingredients comprising a mineral acid and a Group IIA hydroxide, or a Group IIA salt of a dibasic acid, or a mixture of the two, and wherein the solution or suspension of AGIIS having a certain acid normality is less effective in charring sucrose and less corrosive to an animal skin than a saturated solution of calcium sulfate in sulfuric acid having the same acid normality, and wherein the solution or suspension of an AGIIS is of low volatility at room temperature and pressure; and

wherein the salt of phosphoric acid comprises a divalent metal salt of phosphoric acid or a mono-valent metal salt of phosphoric acid.

20. (Original) The composition of claim 19, further comprising an additive.

21. (Original) The composition of claim 20, wherein the additive comprises lactic acid, acetic acid, propionic acid, oxalic acid, peracetic acid, sorbic acid, benzoic acid, butyric acid, glycolic acid, formic acid, monoperphthalic acid, or a mixture thereof.

22. (Original) The composition of claim 19, wherein the solution or suspension of AGIIS is in an amount in excess of the amount required to completely convert the salt of phosphoric acid to phosphoric acid.

23. (Currently amended) A composition having an acidic pH, the composition being prepared by mixing ingredients comprising:

a salt of phosphoric acid;

a preformed, or in-situ generated, solution or suspension of an acidic sparingly-soluble Group IIA complex ("AGIIS"), wherein the solution or suspension of AGIIS is in an amount sufficient to render the acidic pH of the composition to be less than about 2; and

an organic acid comprising lactic acid, acetic acid, propionic acid, oxalic acid, peracetic acid, sorbic acid, benzoic acid, butyric acid, glycolic acid, formic acid, monoperphthalic acid, or a mixture thereof ;

wherein the solution or suspension of the AGIIS is isolated from a mixture formed by mixing ingredients comprising a mineral acid and a Group IIA hydroxide, or a Group IIA salt of a dibasic acid, or a mixture of the two, and wherein the solution or suspension of AGIIS having a certain acid normality is less effective in charring sucrose and less corrosive to an animal skin than a saturated solution of calcium sulfate in sulfuric acid having the same acid normality, and wherein the solution or suspension of an AGIIS is of low volatility at room temperature and pressure; and

wherein the salt of phosphoric acid comprises a divalent metal salt of phosphoric acid or a mono-valent metal salt of phosphoric acid.

24. (Original) The composition of claim 23, wherein the solution or suspension of AGIIS is in an amount in excess of the amount required to completely convert the salt of phosphoric acid to phosphoric acid.

25. (Original) A prepared nutriment comprising:

a nutriment material; and

absorbed therein or adsorbed thereon being a solution or suspension of a composition having an acidic pH, the composition being prepared by mixing ingredients comprising:

a salt of phosphoric acid; and

preformed, or in-situ generated, solution or suspension of an acidic sparingly-soluble Group IIA complex ("AGIIS"), wherein the solution or suspension of AGIIS is in an amount sufficient to render the acidic pH of the composition to be less than about 2.

26. (Original) The prepared nutriment of claim 25, wherein the solution or suspension of the AGIIS is isolated from a mixture comprising a mineral acid and a Group IIA hydroxide, or a Group IIA salt of a dibasic acid, or a mixture of the two.

27. (Original) The prepared nutriment of claim 26, wherein the Group IIA hydroxide comprises calcium hydroxide, the mineral acid comprises sulfuric acid and the Group IIA salt of a dibasic acid comprises calcium sulfate.

28. (Original) The prepared nutriment of claim 25, wherein the solution or suspension of AGIIS having a certain acid normality is less effective in charring sucrose and less corrosive to an animal skin than a saturated solution of calcium sulfate in sulfuric acid having the same acid normality, and wherein the solution or suspension of an AGIIS is of low volatility at room temperature and pressure.

29. (Original) The prepared nutriment of claim 25, wherein the salt of phosphoric acid comprises a divalent metal salt of phosphoric acid.

30. (Original) The prepared nutriment of claim 29, wherein the divalent metal comprises an alkali earth metal or a metal of first transition series.

31. (Original) The prepared nutriment of claim 25, wherein the salt of phosphoric acid comprises a mono-valent metal salt of phosphoric acid.

32. (Original) The prepared nutriment of claim 31, wherein the mono-valent metal comprises an alkali metal.

33. (Original) The prepared nutriment of claim 25, further comprising an additive.

34. (Original) The prepared nutriment of claim 33, wherein the additive comprises an alcohol.

35. (Original) The prepared nutriment of claim 34, wherein the alcohol comprises a lower aliphatic alcohol having six or less carbon atoms.

36. (Original) The prepared nutriment of claim 33, wherein the additive comprises an organic acid.

37. (Original) The prepared nutriment of claim 36, wherein the organic acid comprises lactic acid, acetic acid, propionic acid, oxalic acid, peracetic acid, sorbic acid, benzoic acid, butyric acid, glycolic acid, formic acid, monoperphthalic acid, or a mixture thereof.

38. (Original) The prepared nutriment of claim 33, wherein the additive comprises a cationic surface active agent, an anionic surface active agent, a non-ionic surface active agent, or a mixture thereof.

39. (Original) The prepared nutriment of claim 25, wherein the additive comprises periodic acid.

40. (Original) The prepared nutriment of claim 25, wherein the nutriment material comprises an animal product, a plant product, a beverage, or a mixture thereof.

41. (Original) The prepared nutriment of claim 25, wherein the solution or suspension of AGIIS is in an amount in excess of the amount required to completely convert the salt of phosphoric acid to phosphoric acid.

42. (Original) The prepared nutriment of claim 41 further comprising lactic acid, acetic acid, propionic acid, oxalic acid, peracetic acid, sorbic acid, benzoic acid, butyric acid, glycolic acid, formic acid, monoperphthalic acid, or a mixture thereof.

43. (Original) A prepared nutriment comprising:

a nutriment material; and

absorbed therein or adsorbed thereon being a solution or suspension of a composition having an acidic pH, the composition being prepared by mixing ingredients comprising:

a divalent or mono-valent metal salt of phosphoric acid; and

preformed, or in-situ generated, solution or suspension of an acidic sparingly-soluble Group IIA complex ("AGIIS"), wherein the solution or suspension of the AGIIS is isolated from a mixture a mixture formed by mixing ingredients comprising comprising a mineral acid and a Group IIA hydroxide, or a Group IIA salt of a dibasic acid, or a mixture of the two, and wherein the solution or suspension of AGIIS is in an amount sufficient to render the acidic pH of the composition to be less than about 2; and

an additive comprising an alcohol, an organic acid, a periodic acid, a surface active agent, or a combination thereof.

44. (Original) The prepared nutriment of claim 43, wherein the Group IIA hydroxide comprises calcium hydroxide, the mineral acid comprises sulfuric acid, and the Group IIA salt of a dibasic acid comprises calcium sulfate.

45. (Original) The prepared nutriment of claim 43, wherein the solution or suspension of AGIIS having a certain acid normality is less effective in charring sucrose and less corrosive to an animal skin than a saturated solution of calcium sulfate in sulfuric acid having the same acid normality, and wherein the solution or suspension of an AGIIS is of low volatility at room temperature and pressure.

46. (Original) The prepared nutriment of claim 43, wherein the divalent metal comprises an alkali earth metal or a metal of first transition series.

47. (Original) The prepared nutriment of claim 43, wherein the mono-valent metal comprises an alkali metal.

48. (Original) The prepared nutriment of claim 43, wherein the additive comprises lactic acid, acetic acid, propionic acid, oxalic acid, peracetic acid, sorbic acid, benzoic acid, butyric acid, glycolic acid, formic acid, monoperphthalic acid, or a mixture thereof.

49. (Original) The prepared nutriment of claim 43, wherein the additive comprises a cationic surface agent, an anionic surface active agent, a non-ionic surface active agent, or a mixture thereof.

50. (Original) The prepared nutriment of claim 43, wherein the nutriment material comprises an animal product, a plant product, a beverage, or a mixture thereof.

51. (Original) The prepared nutriment of claim 43, wherein the solution or suspension of AGIIS is in an amount in excess of the amount required to completely convert the divalent or the mono-valent metal salt of phosphoric acid to phosphoric acid.

52. (Original) A prepared nutriment comprising:

a nutriment material; and

absorbed therein or adsorbed thereon being a solution or suspension of a composition having an acidic pH, the composition being prepared by mixing ingredients comprising:

a divalent or mono-valent metal salt of phosphoric acid;

a preformed, or in-situ generated, solution or suspension of an acidic sparingly-soluble Group IIA complex ("AGIIS"), wherein the solution or suspension of the AGIIS is isolated from a mixture formed by mixing ingredients comprising a mineral acid and a Group IIA hydroxide, or a Group IIA salt of a dibasic acid, or a mixture of the two, and

wherein the solution or suspension of AGIIS is in an amount in excess of the amount required to completely convert the salt of divalent or mono-valent metal salt of phosphoric acid to phosphoric acid; and

an additive comprising an alcohol, an organic acid, a periodic acid, a surface active agent, or a combination thereof.

53. (Original) The prepared nutriment of claim 52, wherein the Group IIA hydroxide comprises calcium hydroxide, the mineral acid comprises sulfuric acid, and the Group IIA salt of a dibasic acid comprises calcium sulfate.

54. (Original) The prepared nutriment of claim 52, wherein the solution or suspension of AGIIS having a certain acid normality is less effective in charring sucrose and less corrosive to an animal skin than a saturated solution of calcium sulfate in sulfuric acid having the same acid normality, and wherein the solution or suspension of an AGIIS is of low volatility at room temperature and pressure.

55. (Original) The prepared nutriment of claim 52, wherein the divalent metal comprises an alkali earth metal or a metal of first transition series.

56. (Original) The prepared nutriment of claim 52, wherein the mono-valent metal comprises an alkali metal.

57. (Original) The prepared nutriment of claim 52, wherein the additive comprises lactic acid, acetic acid, propionic acid, oxalic acid, peracetic acid, sorbic acid, benzoic acid, butyric acid, glycolic acid, formic acid, monoperphthalic acid, or a mixture thereof.

58. (Original) The prepared nutriment of claim 52, wherein the additive comprises a cationic surface agent, an anionic surface active agent, a non-ionic surface active agent, or a mixture thereof.

59. (Original) The prepared nutriment of claim 52, wherein the nutriment material comprises an animal product, a plant product, a beverage, or a mixture thereof.

60. (Currently amended) A prepared nutriment comprising:

a nutriment material; and

absorbed therein or adsorbed thereon being a solution or suspension of a composition having an acidic pH, the composition being prepared by mixing ingredients comprising:

~~a mineral acid~~ sulfuric acid and a salt of phosphoric acid, wherein the amount of mineral acid is in an amount sufficient to render the acidic pH of the composition to be less than about 2; and

lactic acid, acetic acid, propionic acid, oxalic acid, peracetic acid, sorbic acid, benzoic acid, butyric acid, glycolic acid, formic acid, monoperphthalic acid, or a mixture thereof.

61. (Cancelled).

62. (Original) The prepared nutriment of claim 60, wherein the salt of phosphoric acid comprises bivalent or mono-valent metal salt of phosphoric acid.

63. (Cancelled).

64. (Original) The prepared nutriment of claim 60, wherein the nutriment material comprises an animal product, a plant product, a beverage, or a mixture thereof.

65. (Original) A method for reducing biological contaminants in a nutriment material comprising:

contacting the nutriment material with a solution or suspension of a composition having an acidic pH, the composition being prepared by mixing ingredients comprising:

a salt of phosphoric acid; and

a preformed, or in-situ generated, solution or suspension of an acidic sparingly-soluble Group IIA complex ("AGIIS"), wherein the solution or suspension of AGIIS is in an amount sufficient to render the acidic pH of the composition to be less than about 2.

66. (Original) The method of claim 65, wherein the solution or suspension of the AGIIS is isolated from a mixture comprising a mineral acid and a Group IIA hydroxide, or a Group IIA salt of a dibasic acid, or a mixture of the two.

67. (Original) The method of claim 66, wherein the Group IIA hydroxide comprises calcium hydroxide, the mineral acid comprises sulfuric acid and the Group IIA salt of a dibasic acid comprises calcium sulfate.

68. (Original) The method of claim 65, wherein the solution or suspension of AGIIS having a certain acid normality is less effective in charring sucrose and less corrosive to an animal skin than a saturated solution of calcium sulfate in sulfuric acid having the same acid normality, and wherein the solution or suspension of an AGIIS is of low volatility at room temperature and pressure.

69. (Original) The method of claim 65, wherein the salt of phosphoric acid comprises a divalent metal salt of phosphoric acid.

70. (Original) The method of claim 69, wherein the divalent metal comprises an alkali earth metal or a metal of first transition series.

71. (Original) The method of claim 65, wherein the salt of phosphoric acid comprises a mono-valent metal salt of phosphoric acid.

72. (Original) The method of claim 65, wherein the mono-valent metal comprises an alkali metal.

73. (Original) The method of claim 65, further comprising an additive.

74. (Original) The method of claim 73, wherein the additive comprises an alcohol.

75. (Original) The method of claim 74, wherein the alcohol comprises a lower aliphatic alcohol having six or less carbon atoms.

76. (Original) The method of claim 73, wherein the additive comprises an organic acid.

77. (Original) The method of claim 76, wherein the organic acid comprises lactic acid, acetic acid, propionic acid, oxalic acid, peracetic acid, sorbic acid, benzoic acid, butyric acid, glycolic acid, formic acid, monoperphthalic acid, or a mixture thereof.

78. (Original) The method of claim 73, wherein the additive comprises a surface active agent.

79. (Original) The method of claim 78, wherein the surface active agent comprises a cationic surface active agent, an anionic surface active agent, a non-ionic surface active agent, or a mixture thereof.

80. (Original) The method of claim 73, wherein the additive comprises periodic acid.

81. (Original) The method of claim 65, wherein the nutriment material comprises an animal product, a plant product, a beverage, or a mixture thereof.

82. (Original) The method of claim 65, wherein the solution of suspension of AGIIS is in an amount in excess of the amount required to completely convert the salt of phosphoric acid to phosphoric acid.

83. (Original) The method of claim 65, wherein the biological contaminants comprise microbes.

84. (Original) The method of claim 65, wherein the biological contaminants comprise mold.

85. (Original) A method for reducing biological contaminants in a nutriment material comprising:

contacting the nutriment material with a solution or suspension of an composition having an acidic pH, the composition being prepared by mixing ingredients comprising:

a divalent or mono-valent metal salt of phosphoric acid;

a preformed, or in-situ generated, solution or suspension of an acidic sparingly-soluble Group IIA complex ("AGIIS"), wherein the solution or suspension of the AGIIS is isolated from a mixture formed by mixing ingredients comprising comprising a mineral acid and a Group IIA hydroxide, or a Group IIA salt of a dibasic acid, or a mixture of the two; and wherein the solution or suspension of AGIIS is in an amount sufficient to render the acidic pH of the composition to be less than about 2; and

an additive comprising an alcohol, an organic acid, a periodic acid, a surface active agent, or a combination thereof.

86. (Original) The method of claim 85, wherein the Group IIA hydroxide comprises calcium hydroxide, the mineral acid comprises sulfuric acid, and the Group IIA salt of a dibasic acid comprises calcium sulfate.

87. (Original) The method of claim 85, wherein the solution or suspension of AGIIS having a certain acid normality is less effective in charring sucrose and less corrosive to an animal skin than a saturated solution of calcium sulfate in sulfuric acid having the same acid normality, and wherein the solution or suspension of an AGIIS is of low volatility at room temperature and pressure.

88. (Original) The method of claim 85, wherein the divalent metal comprises an alkali earth metal or a metal of first transition series.

89. (Original) The method of claim 85, wherein the mono-valent metal comprises an alkali metal.

90. (Original) The method of claim 85, wherein the additive comprises lactic acid, acetic acid, propionic acid, oxalic acid, peracetic acid, sorbic acid, benzoic acid, butyric acid, glycolic acid, formic acid, monoperphthalic acid, or a mixture thereof.

91. (Original) The method of claim 85, wherein the additive comprises a cationic surface active agent, an anionic surface active agent, a non-ionic surface active agent, or a mixture thereof.

92. (Original) The method of claim 85, wherein the additive comprises a lower aliphatic alcohol having six or less carbon atoms.

93. (Original) The method of claim 85, wherein the nutriment material comprises an animal product, a plant product, a beverage, or a mixture thereof.

94. (Original) The method of claim 85, wherein the solution or suspension of AGIIS is in an amount in excess of the amount required to completely convert the divalent or mono-valent metal salt of phosphoric acid to phosphoric acid.

95. (Original) The method of claim 85, wherein the biological contaminants comprise microbes.

96. (Original) The method of claim 85, wherein the biological contaminants comprise mold.

Applicants have carefully considered this Application in connection with the Examiner's Action, and respectfully request reconsideration of this Application in view of the above Amendment and the following remarks.

Pending in the application are Claims 1 – 96.

I. Rejections Under 35 U.S.C. §112, First Paragraph

Claims 1 – 59 and 65 – 96 stand rejected under 35 U.S.C. §112, first paragraph for being non-enabling for the processes described in these claims. The Examiner asserts that the specification is only enabling for processes using sulfuric acid, calcium hydroxide, calcium carbonate, and/or calcium sulfate to prepare "AGIIS." Applicants respectfully submit that one of skill in the art would understand both the components and the processes which may be used to create AGIIS based on general principles of chemistry and common knowledge regarding similar chemical properties.

The Examiner has correctly pointed out that a solution of AGIIS having the same normality as saturated calcium sulfate in sulfuric acid does not char sucrose as readily, has low volatility at room temperature and pressure, and is less corrosive to human skin. Rather than by dissolving the salt of a dibasic acid (such as calcium sulfate) in a mineral acid (such as sulfuric acid), Applicant's AGIIS is prepared by mixing (1) **a mineral acid** (such as sulfuric acid) with (2) a **Group IIA hydroxide** (such as calcium hydroxide), or with (3) a **Group IIA salt of a dibasic acid** (such as calcium sulfate), or with (4) a **mixture** of the two Group IIA materials. *See*, Specification, page 7, lines 18 – 20. Mixing these components preferably generates a sparingly-soluble Group IIA salt, which precipitates and is filtered out. *See*, Specification, page 12, lines 10 – 11; and Examples 1 – 3. The exact nature of the remaining acidic composition is unknown, although it is believed that one embodiment of AGIIS comprises near-saturated, saturated, or super-saturated calcium, sulfate anions or variations thereof, and/or complex ions containing calcium, sulfates, and/or variations thereof. *See*, page 7, lines 1 – 5.

As a person of ordinary skill in the art is aware, the properties of all of the Group IIA metals are very similar. All are divalent and can be substituted into the formulas on page 8, lines 4 – 11, without undue experimentation. For example, magnesium can be substituted for calcium so that the workable schemes for preparing AGIIS also include:

(1) H_2SO_4 and $Mg(OH)_2$;

(2) H_2SO_4, $Mg(OH)_2$, and $MgCO_3$;

(3) H_2SO_4, $Mg(OH)_2$, $MgCO_3$, and CO_2 (gas);

(4) H_2SO_4, $MgCO_3$, and $Mg(OH)_2$;

(5) H_2SO_4, $Mg(OH)_2$, and $MgSO_4$;

(6) H_2SO_4, $MgSO_4$, $MgCO_3$, and $Mg(OH)_2$;

(7) H_2SO_4, $MgSO_4$, $MgCO_3$, and CO_2 (gas); and

(8) H_2SO_4, $MgSO_4$, $MgCO_3$, CO_2 (gas), and $Mg(OH)_2$.

As stated above, mixing the selected ingredients preferably forms a sparingly-soluble Group IIA salt. *See*, Specification, page 12, lines 10 – 11; and Examples 1 – 3. Thus, standard solubility principles are considered when choosing the anion of the inorganic acid (and thus the inorganic acid itself). The anion of the inorganic acid, when combined with the Group IIA metal ion, should be at least somewhat soluble. Saturation or over-saturation of the solution will cause precipitation of the salt due to the common ion effect. Anions which are known to generally produce soluble salts in combination with almost any suitable cation include acetate, chlorate, chromate, nitrate, and sulfate. Similarly, cations of potassium, sodium, and ammonium are generally known to produce soluble salts in combination with almost any suitable anion. A person of skill in the art would understand these solubility principles and be able to choose an appropriate combination of Group IIA metal and inorganic acid accordingly.

The Examiner states that undue experimentation would be required to determine which components other than those disclosed could be used in combination with each other to arrive at AGIIS having the disclosed properties. Applicants assert that, based on the common chemical properties of alternative Group IIA metals, Group IIA salts, Group IIA hydroxides, and mineral acids, AGIIS prepared by any permutation of these components is expected to have the same properties. Knowledge of basic solubility principles, such as choice of components and mixing

conditions, is well within the skill in the art. Mixing the appropriate acid, base, and salt components as described in the examples is also routine. Thus, although AGIIS is claimed broadly to cover many components, the specification is sufficiently enabling. The time and difficulty of any required experiments are not determinative if they are merely routine. *See In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988).

Furthermore, the presence of any possible inoperative embodiments within the scope of a claim does not necessarily render a claim non-enabled. The standard is whether a skilled person could determine which embodiments that were conceived, but not yet made, would be inoperative or operative with expenditure of no more effort than is normally required in the art. *See Atlas Powder Co. v. E.I. duPont de Nemours & Co.*, 750 F.2d 1569, 1577 (Fed. Cir. 1984). Thus, even if the Examiner is doubtful that all of the claimed components can be utilized to create AGIIS having the same properties, it would be well within the skill in the art to determine which combinations fail to create an acidic composition having favorable properties compared to a saturated solution of calcium sulfate in sulfuric acid having the same normality.

For all of these reasons, Applicants respectfully submit that Claims 1 – 59 and 65 – 96 are enabled and patentable 35 U.S.C. §112, first paragraph.

II. **Rejections Under 35 U.S.C. §102(b)/103(a)**

A. U.S. Patent No. 5,087,467 to Schwank

Claims 60 – 62 and 64 are rejected under 35 U.S.C. §102(b) or §103(a) as anticipated by or obvious in light of U.S. Patent No. 5,087,467 to Schwank ("Schwank"). The Examiner asserts that Schwank discloses produce immersed in an aqueous solution having a pH of less than 2, or, at the least discloses products containing the same ingredients as Applicants' claimed subject matter. Applicants respectfully submit that Schwank does not anticipate or render obvious Claims 60 – 62 and 64.

Applicants have amended Claim 60 to state that the mineral acid is sulfuric acid and to recite the inclusion of an organic acid. Claims 61 and 63 have been cancelled.

First, **Schwank teaches away from Claims 60 – 62 and 64 by teaching buffered acidic solutions**, in which the salt has the same anion of the strong inorganic acid. Schwank's Example 6 utilizes a buffered solution of sulfuric acid and sodium sulfate. Example 7 utilizes a buffered solution of phosphoric acid and phosphate salt. By contrast, Claims 60 – 62 and 64 do not utilize salts having the same anion as that of the strong inorganic acid and do not generate a buffered solution. When Schwank uses both a salt and an acid, Schwank relies on the anions of the salt to inhibit the phenolase enzyme, while adding the acid to merely adjust the pH below 2. *See*, Schwank, Col. 2, lines 20 – 31; Example 9. By contrast, Claims 60 – 62 and 64 pertain to a nutriment treated with an acidic composition in which the mineral acid reacts with the salt of phosphoric acid to re-generate phosphoric acid. *See*, Specification, Page 34, lines 2 – 5.

Second, Applicants assert that Schwank's additional rinsing step makes the resultant food product different because it eliminates the ongoing effect that the acidic composition will have on the prepared nutriment material when it has been absorbed or adsorbed. Applicants assert again that **Schwank teaches away from failing to rinse the acidic solution** by stating that samples of vegetables which were treated with the acidic solution but not rinsed had a "rubbery" texture. *See*, Schwank, Example 5. **Schwank's Example 3, which lacks a rinsing step, uses phosphoric acid alone** and thus is not applicable to Claims 60 – 62 and 64.

Finally, Applicants assert that Schwank alone does not disclose nor teach the use of an organic acid. Claim 60 has been amended to recite the inclusion of an organic acid.

For these reasons, Schwank neither discloses nor teaches Claims 60 – 62 and 64, in which the acidic solution contains an organic acid and is not rinsed from the nutriment material. Schwank's composition is not capable of performing the intended use of Claims 60 – 62 and 64 because Schwank does not use or suggest an absorbed or adsorbed acidic solution with an ongoing effect in the absence of adverse effects of taste and texture. Thus, there is a structural difference between Schwank and Claims 60 – 62 and 64 and these claims are not anticipated by or rendered obvious in light of Schwank.

III. **Rejections Under 35 U.S.C. §103(a)**

A. Schwank, in view of U.S. Patent No. 6,375,976 to Roden et al.

The Examiner has also rejected Claims 60 – 64 as being unpatentable over Schwank, in view of U.S. Patent No. 6,375,976 to Roden et al. ("Roden"). Roden discloses an antimicrobial mixture of GRAS inorganic acids and an organic hydroxy acid. *See*, Roden, Col. 2, line 62 – Col. 3, line 5. Applicants respectfully assert that neither Schwank nor Roden, nor the combination of the two, teach Applicants' particular claimed composition, nor that it may be absorbed into or adsorbed onto a nutriment material. Applicants also respectfully assert that Roden teaches away from Applicants' composition by discussing the chelating capabilities of the organic acids.

First, as discussed above, **Schwank does not teach or suggest (1) Applicant's acidic composition containing sulfuric acid, a salt of phosphoric acid, and an organic acid or (2) a nutriment material with the acidic composition absorbed or adsorbed.**

Roden's disclosed acidic compositions are composed of a mixture of inorganic acids, such as hydrochloric acid and phosphoric acid, with an organic hydroxy acid, such as citric acid. *See*, Roden, Col. 3, line 13 – line 15. Roden teaches that the chelating capability of the organic acid is important. *See*, Roden, Col. 3, lines 2 – 7. However, **the acidic composition of Claims 60 – 64 contains metal ions which must not be chelated by the organic acids**. The metal ions from the salt of phosphoric acid react with sulfuric acid to create a sparingly soluble sulfate salt, which is filtered out of the solution. *See*, Specification, Example 10, Procedures A, B, and C. Thus, a person of ordinary skill in the art would not have been motivated to use the chelating organic hydroxy acids of Roden because **chelation of the necessary metal ions would have destroyed the activity of the acidic composition by preventing the formation of the sparingly soluble salts**. Roden teaches away from the claimed acidic composition by teaching the importance of chelation.

Furthermore, Roden teaches a **blended** acidic composition containing inorganic acids and an organic hydroxy acid. In other words, the acids are mixed together to form a homogeneous composition, but they do not react with one another. *See*, Roden, Col. 5, line 58 – Col. 6, line 9. By contrast, **the organic acids used in Applicants' acidic composition are not used to create a**

blend of acids, but rather act as an additive to enhance the effectiveness of the reaction products of the mineral acid and salt of phosphoric acid. *See*, Specification, page 13, lines 8 – 10. Applicants' components undergo a reaction, regenerating phosphoric acid and producing a precipitate. *See*, Specification, Example 10, Procedures A, B, and C. Thus, because Applicants were not concerned with producing a blended acidic composition, the teachings of Roden would not have motivated Applicants to create the claimed subject matter.

For all of these reasons, Claims 60 – 64 are patentable over Schwank in view of Roden.

B. Schwank, in view of Roden and U.S. Patent No. 5,087,467 to Wurzburger et al.

Claims 1, 2, 4 – 15, 17 – 38, 40 – 79, and 81 – 96 also stand rejected as being unpatentable over Schwank in view of Roden and U.S. Patent No. 5,087,467 to Wurzburger et al. ("Wurzburger"). Applicants respectfully submit that the references in combination do not render the claimed subject matter obvious because they do not suggest the claimed composition.

As discussed above, **Schwank does not teach or suggest (1) Applicant's acidic composition containing sulfuric acid, a salt of phosphoric acid, and an organic acid or (2) a nutriment material with the acidic composition absorbed or adsorbed.** In addition, **Roden does not teach or suggest (1) an acidic composition with un-chelated metal ions capable of producing sparingly soluble salts or (2) a composition whose components react to regenerate an acid from its salt.**

Wurzburger likewise does not disclose Applicants' claimed composition because **Wurzburger does not disclose AGIIS**. Independent Claims 1, 19, 23, 25, 43, 52, 65, and 85 list AGIIS as a required element. Wurzburger does not disclose, teach, or suggest AGIIS because **Wurzburger discloses an acidic composition that is an equimolar mixture of an acid, such as sulfuric acid, with a chemically equivalent amount of a base, such as calcium hydroxide.** See, Wurzburger, Col. 4, lines 45 – 49. The solution remaining in Wurzburger after the precipitate is filtered contains not more than 2500 ppm sulfate ions. *See*, Wurzburger, Col. 4, lines 58 - 61. A person of skill in the art understands that when the remaining sulfate ion concentration is this small, equimolar amounts of the acid and base have been mixed, effectively neutralizing them. By contrast,

when AGIIS is prepared with sulfate and calcium ions, the concentration of remaining sulfate ions is considerably higher. For example, the concentration of sulfate ions may be as high as 73560 ppm in a 1.2 N solution of AGIIS and 7356000 ppm in a 29 N solution of AGIIS. *See*, Specification, page 12, lines 1 – 6. **The amounts of acid and base mixed to prepare AGIIS are not equimolar.** Rather, when AGIIS is prepared from sulfuric acid, calcium hydroxide, and/or calcium sulfate, the molar ratio of calcium hydroxide to sulfuric acid may be, for example, 0.44, 0.45, or 0.31. *See*, Specification, Examples 1 – 3. Thus, the nature of Wurzburger's acidic composition is considerably different, and a person of ordinary skill in the art would not have been motivated to create AGIIS based on Wurzburger.

Furthermore, **Wurzburger does not teach or suggest the use of a salt of phosphoric acid**. In the absence of a suggestion within the references to combine a salt of phosphoric acid and a mixture of a mineral acid with a Group IIA hydroxide, or a Group IIA salt of a dibasic acid, or a mixture of the two Group IIA materials, Applicants' claimed subject matter could not have been considered obvious.

In summary:

(1) Schwank teaches solutions of phosphate anions alone or phosphate anions combined with strong acids;

(2) Roden teaches blends of inorganic acids with chelating organic acids; and

(3) Wurzburger teaches equimolar mixtures of acid and metal hydroxide.

To establish a prima facie case of obviousness based on a combination of the content of various references, there must be some teaching, suggestion or motivation in the prior art to make the specific combination that was made by the applicant. *See In re Raynes*, 28 U.S.P.Q.2d 1630, 1631 (Fed. Cir. 1993).

WHERE IS THE TEACHING OR SUGGESTION OF:

(a) **selecting** only the disclosure of using phosphate ions and a strong acid but **discarding** the disclosure that failing to rinse the solution made the food product "rubbery" (from Schwank);

(b) **selecting** only the disclosure of using an organic acid but **discarding** the disclosure that such organic acids are chelators (from Roden);

(c) **selecting** only the disclosure of using an acid and a metal hydroxide but **discarding** the disclosure that the mixture should be equimolar (from Wurzburger); and

(d) **selecting** the disclosure of using an acid and a metal hydroxide and **adding** the use of a salt of phosphoric acid?

In discussing a rejection under 35 U.S.C. 103, the Court, in *In re Wesslau*, 147 U.S.P.Q. 391, 393 (C.C.P.A. 1965) held that:

> It is impermissible within the framework of Section 103 to pick and **choose** from any one reference only so much of its as will support a given position, to the **exclusion** of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. [Emphasis added].

The Examiner cannot abstract certain parts of a particular reference and selectively discard the remaining parts that are not essential to Applicant's claims, thereby using the claimed subject matter as a type of blueprint by which the prior art is constructed. This type of piecemeal reconstruction of the references in light of Applicant's disclosure cannot be the basis for holding the invention obvious. *In re Kamm and Young*, 172 U.S.P.Q. 298, 301-302 (C.C.P.A. 1972).

In conclusion, neither Schwank, nor Roden, nor Wurzburger, nor the references in combination render Claims 1, 2, 4 – 15, 17 – 38, 40 – 79, and 81 – 96 obvious.

IV. Conclusion

Applicants respectfully submit that, in light of the foregoing Amendment and comments, Claims 1 – 96 are in condition for allowance. A Notice of Allowance is therefore requested.

If the Examiner has any other matters which pertain to this Application, the Examiner is encouraged to contact the undersigned to resolve these matters by Examiner's Amendment where possible.

Respectfully submitted,

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